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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,558	03/30/2001	John S. Howard	42390P10857	6360

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER

DANG, KHANH NMN

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 08/27/2003

2

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,558

Applicant(s)

HOWARD ET AL.

Examiner

Khanh Dang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10-17, 19, 22-24, 27, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Larky et al.

At the outset, it is noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Larky et al. With regard to claim 1, Larky et al. discloses an apparatus comprising: a bus master (12, for example) to control transactions on a bus; a schedule (as in any USB device/bus, the USB device/bus of Larky et al. must adhere to the USB/Host Controller Specification (widely available from the Internet, for example) wherein period and asynchronous schedule (set up by the host controller driver software and "contain information about a plurality of endpoints) must be provided for scheduling transactions of a plurality of endpoints coupled to the bus; and a counter (also "counter" in Larky et

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al.) to count flow control events (NAKs, for example) issued by at least one of the plurality of endpoints, such that the bus master suspends service to an endpoint which has issued a threshold number of flow control events (a threshold number of NAK signal, for example). With regard to claims 22, 23, 27, and 28, as in any USB device/bus, the USB device/bus of Larky et al. must adhere to the USB/Host Controller Specification (widely available from the Internet, for example) wherein transfers/transactions are executed in queues having a queue control controlling from a circular linked list and/or frame list (array of elements). With regard to claim 24, it is clear that the USB schedule is stored in a "memory." See also explanation above regarding claim 19. With regard to claims 1-7, 9-17, it is clear that one using the system of Larky et al. would have performed the same steps set forth in claims 1-7, 9-17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larky et al.

Larky et al., as explained above, discloses the claimed invention including the use of idle time or timeout. However, Larly et al. does not discloses the use of 10 miceoseconds for idled time or timeout. It would have been obvious to one of ordinary

skill in the art at the time the invention was made to set the idled time or timeout of Larky et al. to 10 microseconds, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 20, 21, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larky et al.

Larky et al., as explained above, discloses the claimed invention including the use of a counter. However, Larky et al. does not particularly disclose the use of a circular counter or linear counter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a circular counter or linear counter for the counter of Larky et al., since the Examiner takes Official Notice that circular and linear counters are old and well-known in the art; and the selection of either counter is clearly within the level of ordinary skill in the art. If the Applicants choose to challenge the fact that linear and circular counters are old and well-known, supportive document(s) will be provided upon request.

Claims 1-19, 22-24, 27, and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Yap.

At the outset, it is noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Yap. With regard to claim 1, Yap. discloses an apparatus comprising: a bus master (2+10, for example) to control transactions on a bus; a schedule (as in any USB device/bus, the USB device/bus 2+10 of Yap must adhere to the USB/Host Controller Specification (widely available from the Internet, for example) wherein period and asynchronous schedule (set up by the host controller driver software and "contain information about a plurality of endpoints) must be provided for scheduling transactions of a plurality of endpoints (printer, keyboard, etc.) coupled to the bus; and a counter (also "counter" in Yap et al.) to count flow control events (NAKs, for example) issued by at least one of the plurality of endpoints, such that the bus master suspends service to an endpoint which has issued a threshold number of flow control events (a threshold number of NAK signal, for example). With regard to claims 22, 23, 27, and 28, as in any USB device/bus, the USB device/bus of Yap et al. must adhere to the USB/Host Controller Specification (widely available from the Internet, for example) wherein transfers/transactions are executed in queues having a queue control controlling from a circular linked list and/or frame list (array of elements). With regard to claim 24, it is clear that the USB schedule is stored in a "memory." See also explanation above regarding claim 19. With regard to claims 1-18, it is clear that one using the system of Yap would have performed the same steps set forth in claims 1-18. With regard to claims 8 and 18, the predetermined idled time or timeout in Yap is at least 2.5 microseconds (emphasis added).

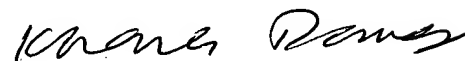
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Claims 20, 21, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yap.

Yap, as explained above, discloses the claimed invention including the use of a counter. However, Yap does not particularly disclose the use of a circular counter or linear counter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select a circular counter or linear counter for the counter of Yap, since the Examiner takes Official Notice that circular and linear counters are old and well-known in the art; and the selection of either counter is clearly within the level of ordinary skill in the art. If the Applicants choose to challenge the fact that linear and circular counters are old and well-known, supportive document(s) will be provided upon request.

U.S. Patent Nos. 6,119,190 to Garney and 6,606,674 to Howard are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.



Khanh Dang
Primary Examiner